

NORTH DAKOTA  
**OUTDOORS**

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GAME AND FISH DEPARTMENT

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## MATTERS OF OPINION



**Terry Steinwand**  
*Director*

**H**ere at the Game and Fish Department, we often work under the unpredictable ways of Mother Nature.

Last year, for example, drought conditions not only hurt farmers and ranchers, but wildlife, too. Most noticeable, maybe, was the influence drought had on pheasants. With little nesting cover and a decline in insects, which are critical in the survival of young birds, the population of the state's most popular upland game bird suffered.

This year, we were all beginning to wonder when Mother Nature would loosen her grip on winter and usher in spring. As you'll read in this issue of *North Dakota OUTDOORS*, Game and Fish Department fisheries personnel set trap nets to catch spawning northern pike later than typical.

There were questions going into the spawn because of the late start, but as you'll learn, the pike egg goal was not only quickly met, but easily surpassed. This is good news as collection, and hatching, of these eggs play a large role in managing pike in many waters across the state.

While I think it's appropriate to applaud Game and Fish Department fisheries crews for their work this spring, we also should take time to thank all waters users in the state for what I hope is a collective, conscious decision to help in the fight against the spread and introduction of aquatic nuisance species in the state.

According to an article in this issue of *OUTDOORS*, "States and provinces all around North Dakota have seen ANS

infestations crop up with alarming regularity, but new infestations are rare here. Since ANS regulations were first enacted 10 years ago, the number of new discoveries of invasive species in state waters is few, but the challenge of keeping them out is greater than ever."

Compared to other states, North Dakota's issues with aquatic nuisance species are few, and I hope that all anglers and other water users continue in their efforts to make sure this is the case another 10 years from now.

Here at Game and Fish, we've worked hard for years to inform the public about the fallout of aquatic nuisance species. While this message is likely sometimes viewed as tiresome, we understand its importance. And, considering the few ANS issues around the state, anglers and others must understand the importance of the message, too.

While I have no interest in hustling what remains of spring and the coming summer down the road, I want to briefly mention, in a roundabout way, the fall deer gun season.

The deer gun season opens on November 9. That's an important date to remember, one that few who live for that time of year forget. One date that could slip through the cracks of busy lives is the June 6 deer gun and muzzleloader application deadline.

And remember, for the first time, all hunters applying for deer gun and muzzleloader licenses will have to do so electronically.

In the meantime, before it's time to pull out the blaze orange hunting gear, venture outside and take advantage of North Dakota's great outdoors.

*Terry Steinwand*

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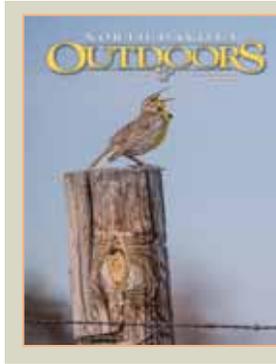
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Front Cover

A Western meadowlark singing on a wooden fencepost is one of a number of signs of spring on the Northern Plains. Photo by Ty Stockton, Bismarck.



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*Paul Bailey, Department south central fisheries supervisor, holds a trophy northern pike before releasing it back into Lake Oahe. The pike was jaw-tagged to provide more information about the pike fishery.*



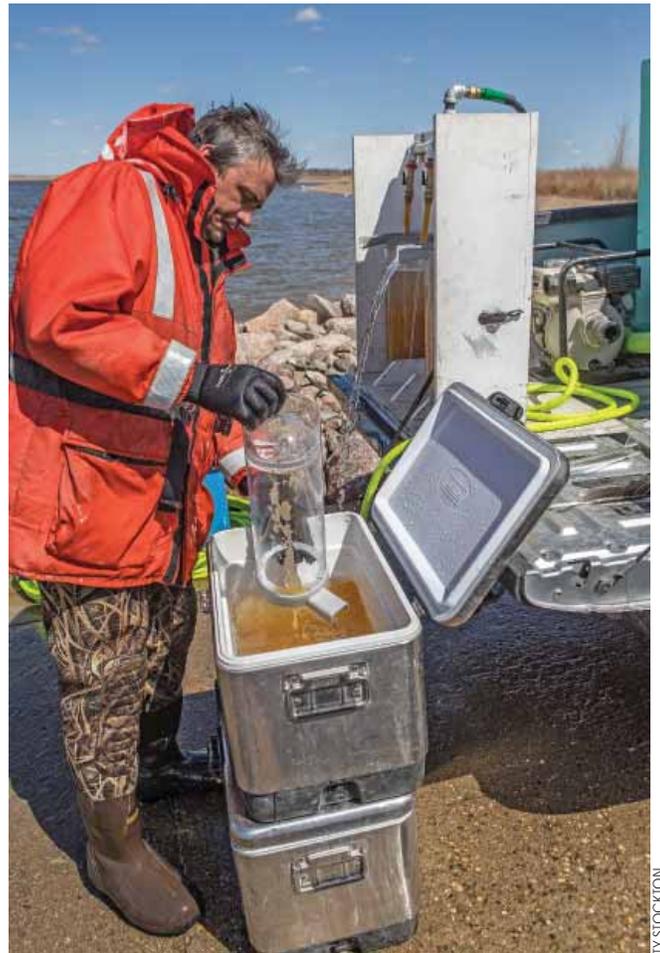
# NORTHERN PIKE SPAWN DELAYED

*By Ron Wilson*

When North Dakota Game and Fish Department fisheries biologists set trap nets in Lake Oahe in spring for the northern pike spawn, they were as late to the game as they'd been in years.

With such a delayed ice-out on Oahe and other waters around the state, the only certainty regarding the spawning of North Dakota's state fish were the uncertainties.

"This is one of the latest springs we've ever encountered as Mother Nature threw a monkey wrench into our plans," said Paul Bailey, south central district fisheries supervisor in Bismarck. "Typically, we're collecting northern pike eggs around the second



Brandon Kratz (left), Department southeast fisheries supervisor, squeezes the eggs out of a female northern pike while Kelly Zorn, Department seasonal employee, stirs the bowl of milt and eggs with a goose feather. Jerry Tishmack (right), Garrison Dam National Fish Hatchery fisheries biologist, empties a jar of fertilized pike eggs into a cooler for transport to the hatchery.

week of April. We're about two weeks behind right now, which has only happened once before (1989 at Devils Lake)."

Fisheries biologists set nets on April 23, the latest in the last 30 years. The first pike eggs and milt were stripped into a stainless steel bowl and gently stirred with a goose feather three days later, also the latest since 1997.

While photoperiod, or day length, and water temperatures are the combined ingredients pike need to spur reproduction, there was some question when Oahe's shallower back bays would warm enough to initiate reproduction.

"It's definitely going to be a very short, intense spawning period this year," Bailey said. "Usually, things are spread out over a

several week period where we have lots of opportunities to collect eggs.

"Things are happening very fast right now as it has warmed up quite quickly," he added. "Two days ago (April 24) Cattail Bay was covered in ice. Today (April 26), it is wide open and water temperatures are up into the low 40s, which is triggering these fish to spawn."

To be prepared for the inevitable – be it the first or second week in April or much later – the trap nets used during the spawning operation were repaired in winter.

"There is nothing worse than getting to a lake with potential to find out that a muskrat has chewed a hole in a net," said Scott Gangl, Department fisheries man-

agement section leader. "When the spawn is on, our staff don't like to waste time."

Turns out, when the pike decided they were ready, there was hardly a surplus of time.

Game and Fish Department fisheries personnel went into spring with a goal of 150 quarts of pike eggs. Between spawning efforts on Oahe and Lake Sakakawea, more than 220 quarts were collected in just two days.

"Certainly, because it's nearly the end of April, some of the fish spawned before we had the opportunity to collect their eggs," Bailey said. "But a pretty high proportion of these pike did delay spawning as they waited for the appropriate water temperatures."



Fisheries biologists (left) weigh a northern pike before releasing it back into Lake Oahe. Kelly Zorn (bottom), Department seasonal employee, carries a net full of pike to the holding tanks in preparation for spawning.

TY STOCKTON



TY STOCKTON

# TROPHY STUDY

Even though the pike spawn was weeks later this spring than typical, it likely won't influence operations at the federal fish hatchery where room will soon be needed for walleye eggs.

Jerry Tishmack, fisheries biologist with Garrison Dam National Fish Hatchery, said the plan was to gradually increase the water temperature in which the pike eggs will incubate to make up for the late spawning date.

"Typically, I will incubate northern pike eggs at 50 degrees, which means they will hatch in 10-12 days," Tishmack said. "This year I will bump it up to 60 degrees and incubate them in nearly seven days. That will buy me nearly four or five days, which will close the window a bit."

After hatching, the pike are raised in hatchery ponds until they are about 1.5 inches long. From there, Game and Fish Department personnel transport the pike to lakes around the state.

Taking the eggs from mature pike, and walleye after that, is simply the first step in nourishing the many lakes across North Dakota's landscape that are enjoyed by thousands of anglers.

"This is an extremely important process as a number of our pike and walleye fisheries across the state lack the ability to sustain themselves through natural reproduction," Bailey said.

"These waters either do not have suitable spawning habitat, or in many cases, the salinity levels are too high for eggs to successfully hatch. Our pike and walleye spawning operations, and our partnership with Garrison Dam and Valley City national fish hatcheries, are essential for maintaining a number of important fisheries around the state."

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*RON WILSON is editor of North Dakota OUTDOORS.*



*Scott Gangl, Department fisheries management section leader, holds a trophy northern pike. The fish was fitted with a jaw tag as part of study of Lake Oahe's trophy pike fishery.*

**N**orth Dakota Game and Fish Department fisheries biologists tagged dozens of big northern pike in 2017 as part of an ongoing study to determine how anglers utilize trophy fish.

While some of those jaw-tagged pike were caught by anglers in winter and the tag numbers reported to Game and Fish, biologists understand that the findings so far are preliminary, considering the small sample size.

Yet, understanding the interest by anglers today in trophy management of big northern pike, the small sample size signals a start.

The Missouri River System study was initiated last spring during Department pike and walleye spawning efforts on lakes Oahe and Sakakawea. Tags were secured to pike measuring 39.4 inches (1 meter) or longer.

In total, 75 qualifying pike from Lake Oahe and 62 from Lake Sakakawea received tags in spring 2017. Paul Bailey, south central district fisheries supervisor in Bismarck, said biologists hope to tag more fish this spring during spawning to increase the sample size of a study that could run the following three to five years.

Of the 75 trophy pike tagged in Oahe, Bailey said 19 were caught by anglers.



PAUL BAILEY

*Justen Barstad, Department fisheries technician, holds a trophy pike he caught while ice fishing March 1, 2018 on Lake Oahe. The fish is one that Barstad tagged during spawning work on April 8, 2017.*

Fifteen were released and four were harvested.

“The number of fish netted and tagged (from Oahe) by biologists is, understandably at this point, a small sample size,” Bailey said. “Yet, I’d say it’s interesting that anglers did encounter 25 percent of that sample size.”

And they harvested just 5 percent, Bailey said.

“Preliminary findings say that anglers are not harvesting an excessive number of the trophy fish,” he said. “It doesn’t look like anglers are having an impact on trophy pike in Oahe.”

Of the 62 tagged pike on Sakakawea,

anglers caught and released four and harvested four, according to Dave Fryda, Missouri River System fisheries supervisor in Riverdale. Fryda said one jaw-tagged pike was also taken by someone darkhouse spearfishing.

Bailey said it takes a pike in Oahe about a decade to reach trophy size, or the 39.4-inch bar set by Game and Fish for the study.

The biggest pike fisheries biologists tagged from Oahe in 2017 was 47.6 inches. It weighed 29 pounds, 7 ounces.

“Oahe is definitely a world class trophy pike fishery now and, at least preliminarily, it looks like our current regulations

and angler harvest rates will continue to allow Oahe to produce a trophy pike fishery into the future,” Bailey said.

Interestingly, on March 1, 2018, Justen Barstad, Department fisheries technician in Bismarck, caught a trophy pike while ice fishing on Oahe that he had tagged during spawning work on April 8, 2017.

The 42.1-inch pike was about 1 pound lighter from when it was tagged to when it was pulled through the ice.

“This fish should put on a bit more weight prior to spawning, but it does confirm how variable weights of these large pike can be over time,” Bailey said.

Hunters need to note that June 6 is the deadline for the deer gun and muzzleloader lottery.



# DEER GUN APPLICATIONS GO ELECTRONIC

By Ron Wilson

The North Dakota Game and Fish Department's plan to move all lottery applications online is in motion.

A law passed by the North Dakota Legislature requiring the Department to develop an all-electronic licensing system, and phase out the old paper license books, actually went into effect April 1, 2016.

What that means is that all license buyers have had to purchase their hunting and fishing licenses for the last two years through the Game and Fish website, at license vendors who are linked into the Game and Fish electronic licensing system, or by calling the Department's toll-free instant licensing system at 800-406-6409.

Starting last fall with swan and fall turkey applications, thousands of hunters have applied

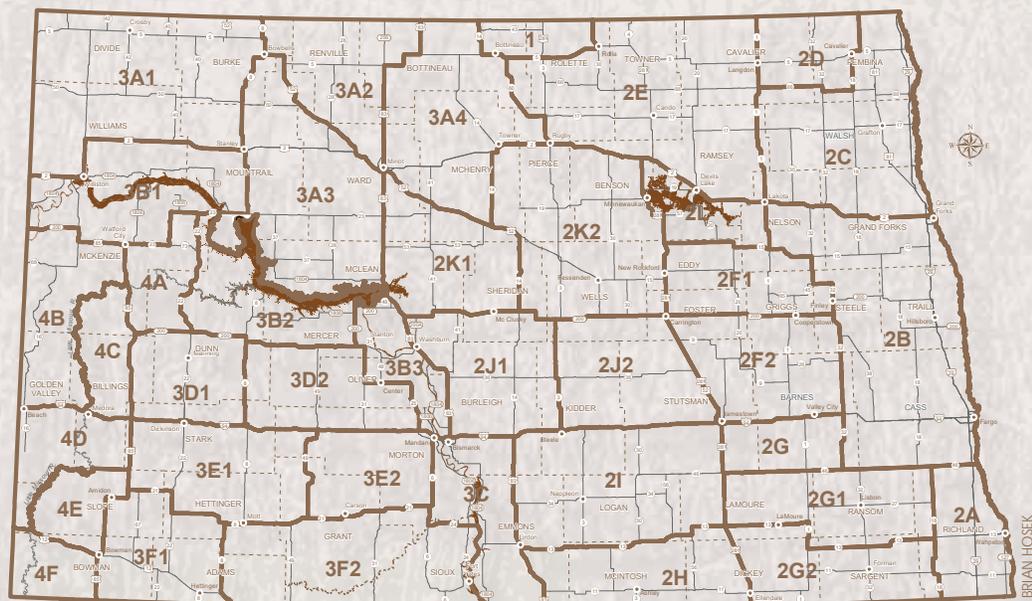
electronically for moose, elk, bighorn sheep and turkey licenses. And just around the corner, with a June 6 deadline, all hunters will do the same for the first time for North Dakota's always anticipated deer gun season.

To help with that process, especially for those hunters who will employ the Department's toll-free instant licensing system, we've provided a map featuring the state's deer hunting units. Plus, readers also will find information from the first deer gun drawing in 2017, and the number of licenses made available in each hunting unit in 2018.

The map and license numbers are also available on the Game and Fish website, [gf.nd.gov](http://gf.nd.gov).

*RON WILSON is editor of North Dakota OUTDOORS.*

## DEER GUN HUNTING UNITS



TY STOCKTON

## Deer Gun License Statistics

The following provides the approximate information from 2017 on deer gun licenses available in each hunting unit, the number of licenses left after gratis deductions and the number of applications received for the first drawing. Nonresident applications are in parenthesis. The number of licenses for each unit for 2018 is also provided.

Deer choices are coded as follows:

- A – Any-antlered deer (either species)
- B – Any-antlerless deer (either species)
- C – Antlered white-tailed deer
- D – Antlerless white-tailed deer
- E – Antlered mule deer
- F – Antlerless mule deer

2017 UNIT	DEER TYPE	AVAIL.	AFTER GRATIS	APPS REC'D. (NR)	2018 AVAIL.
1	A	350	236	826 (14)	350
1	B	350	289	157 (3)	350
2A	A	400	187	941 (18)	400
2A	B	300	186	165 (1)	300
2B	A	1,000	508	3,899 (70)	1,000
2B	B	700	435	990 (10)	700
2C	A	700	241	2,200 (56)	700
2C	B	300	53	377 (8)	300
2D	A	400	232	1,108 (31)	400
2D	B	200	109	99 (1)	200
2E	A	600	163	1,616 (41)	600
2E	B	300	64	230 (0)	200
2F1	A	1,100	846	1,781 (78)	1,100
2F1	B	900	763	314 (8)	900
2F2	A	900	641	2,251 (55)	800
2F2	B	700	561	463 (3)	600
2G	A	500	376	834 (17)	500
2G	B	200	133	149 (2)	100
2G1	A	900	521	2,530 (55)	900
2G1	B	700	496	571 (7)	700
2G2	A	1,000	659	1,768 (49)	1,000
2G2	B	700	516	423 (6)	700
2H	A	900	736	1,586 (61)	900
2H	B	700	612	166 (3)	700
2I	A	1,200	852	2,590 (85)	1,200
2I	B	1,000	812	369 (5)	1,000
2J1	A	900	623	1,594 (31)	900
2J1	B	700	551	198 (3)	600
2J2	A	1,300	1,036	2,119 (74)	1,100
2J2	B	1,000	858	356 (10)	900
2K1	A	800	454	1,801 (29)	800
2K1	B	700	513	288 (2)	700
2K2	A	1,600	1,123	3,405 (97)	1,300

2017 UNIT	DEER TYPE	AVAIL.	AFTER GRATIS	APPS REC'D. (NR)	2018 AVAIL.
2K2	B	1,400	1,143	447 (20)	1,100
2L	A	300	227	488 (18)	300
2L	B	300	261	89 (5)	300
3A1	A	1,000	616	2,462 (69)	1,200
3A1	B	400	193	127 (1)	800
3A2	A	900	714	1,765 (39)	900
3A2	B	700	600	335 (5)	700
3A3	A	900	495	2,200 (55)	1,000
3A3	B	600	382	366 (0)	600
3A4	A	1,000	652	2,458 (43)	1,000
3A4	B	800	613	524 (0)	800
3B1	C	250	150	959 (21)	250
3B1	D	200	105	52 (2)	200
3B1	E	300	179	749 (33)	400
3B1	F	50	26	38 (2)	100
3B2	C	200	125	354 (7)	200
3B2	D	200	143	56 (1)	200
3B2	E	150	93	248 (13)	200
3B2	F	50	36	25 (1)	100
3B3	A	200	166	465 (9)	200
3B3	B	150	131	124 (1)	150
3B3	C	900	746	970 (40)	900
3B3	D	650	568	170 (6)	650
3C	A	150	119	705 (26)	150
3C	B	100	86	146 (1)	150
3C	C	1,000	790	1,228 (28)	1,000
3C	D	800	684	173 (1)	800
3D1	A	300	230	567 (16)	300
3D1	B	300	258	44 (5)	350
3D1	C	250	191	173 (9)	250
3D1	D	200	172	2 (0)	200
3D2	A	400	257	791 (15)	450
3D2	B	400	323	142 (3)	450

2017 UNIT	DEER TYPE	AVAIL.	AFTER GRATIS	APPS REC'D. (NR)	2018 AVAIL.
3D2	C	300	193	260 (1)	300
3D2	D	300	242	30 (0)	300
3E1	A	400	304	892 (40)	450
3E1	B	300	245	108 (3)	300
3E1	C	450	343	467 (10)	500
3E1	D	300	245	21 (1)	300
3E2	A	650	516	1,012 (33)	700
3E2	B	650	567	219 (5)	650
3E2	C	450	358	363 (24)	450
3E2	D	300	261	22 (3)	300
3F1	A	400	366	745 (16)	400
3F1	B	400	379	73 (1)	400
3F1	C	600	548	216 (18)	600
3F1	D	500	474	12 (1)	500
3F2	A	700	598	1,238 (60)	750
3F2	B	1,000	934	118 (5)	1,000
3F2	C	800	684	388 (28)	800
3F2	D	800	748	16 (1)	800
4A	C	250	192	365 (25)	250
4A	D	250	194	35 (0)	250
4A	E	200	154	1,025 (49)	200
4B	C	200	174	208 (6)	200
4B	D	200	174	15 (0)	200
4B	E	450	393	2,569 (180)	450
4B	F	150	131	27 (1)	200
4C	C	200	179	245 (8)	200
4C	D	250	228	11 (1)	300
4C	E	450	404	2,931 (184)	450
4C	F	150	136	44 (4)	250
4D	C	250	222	209 (10)	250
4D	D	250	228	16 (0)	250
4D	E	400	354	2,161 (129)	400
4D	F	200	182	59 (4)	300
4E	C	250	230	179 (12)	300
4E	D	150	138	4 (0)	200
4E	E	300	275	825 (47)	300
4E	F	150	138	24 (0)	250
4F	C	350	328	197 (15)	400
4F	D	300	287	13 (1)	350
4F	E	200	188	334 (26)	200
4F	F	150	144	11 (0)	250



*Pike anglers at Lake Oahe  
get a bite in late April.*



# FISH RESPONSIBLY

*By Ron Wilson*

Anglers will notice new signs at some of their favorite North Dakota fishing destinations this summer, reminding them of the valuable resources finning beneath the surface.

The message the signs impart is simple: "Fish Responsibly. Only Keep What You Will Use. Fish Are Too Valuable To Waste."

Game and Fish personnel will bolt the orange-colored signs into place over the next couple of months at some of the state's higher-use boat ramps on the Missouri River System, Devils Lake and elsewhere.

"The message is intended to get anglers to think about the value of our fisheries and natural resources that belong to everyone and are enjoyed by everyone," said Greg Power, Game and Fish Department fisheries chief. "If the fishing is great all summer, do you really need to keep 50-100 walleyes when you are going to only use 20? We are trying to call to attention to the sometimes unknowing waste of fish."



NORTH DAKOTA GAME AND FISH DEPARTMENT PHOTO

This waste goes beyond freezer-burned filets that were stored too long. Reports from the public and staff have filtered in to Department headquarters about fish dumped in shoreline cattails and roadside ditches.

“If you put in the effort of buying a fishing license, loading your gear and wetting a line, you should have a plan in place when you catch fish,” Power said. “Anglers can’t set the hook first, then worry about what they are going to do with the fish later. We don’t want this valuable resource tossed in the weeds or freezer-burned.”

Scott Gangl, Department fisheries management section leader, said this mentality needs to be aimed at all fish, no matter the species.

“One step in getting people to think about all of this is by putting some value on the fish, be it a walleye, pike or catfish,” Gangl said. “It doesn’t matter what you catch because all fish have value.”

## Fishing Deep

While tossing the day’s catch into the weeds is a deliberate and illegal waste of the resource, there are situations where some anglers are unwittingly killing fish they’ve caught and released.

While catch-and-release is often encouraged, it is only beneficial if the situation supports a safe return of fish to water. Gangl said fish caught in deep water – 25 feet and deeper – fall into that category where survival can be an issue, no matter the time of year.

We’ve reported before in this magazine about what fisheries biologists describe as barotrauma, or when a fish’s swim bladder balloons as it’s reeled up through the water column.

Devils Lake ice anglers commonly catch yellow perch in 30-45 feet of water, while walleye and sauger are pulled from similar depths in summer and fall on Lake Sakakawea.

“In Sakakawea, typically later in summer, walleye are targeting the cold water forage base (rainbow smelt), and anglers are catching these fish in 40-45 feet of water or deeper,” Gangl said.

The problem is that many fish caught from these depths likely don’t survive after they are released because of extreme changes in pressure on their journey to the net, causing swim bladders to expand. A fish under these circumstances can no longer control its balance in the water column.

“Also, extreme changes in pressure can cause eyeballs to pop out or blood vessels to burst and bleed,” Gangl said. “There are likely internal injuries not visible to anglers.”

Gangl said the message to anglers fishing in these situations is that they should plan to keep what they catch. And if anglers want to simply fish for recreation and have no interest in keeping anything for shore lunch, they should target fish in shallow water.

“We want anglers to understand the effects of catching fish from deep water,” Gangl said. “The key to catch-and-release fishing is that you need to release fish unharmed. This is often not the case from fish caught from those depths and then released.”

*These northern pike were left to rot in the cattails. The Game and Fish Department urges anglers to keep only the fish they plan to eat, and to properly release all others back to the water.*

FISH RESPONSIBLY

ONLY KEEP WHAT YOU WILL USE



FISH ARE TOO VALUABLE TO WASTE



NORTH DAKOTA GAME AND FISH DEPARTMENT

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*RON WILSON is editor of North Dakota OUTDOORS.*



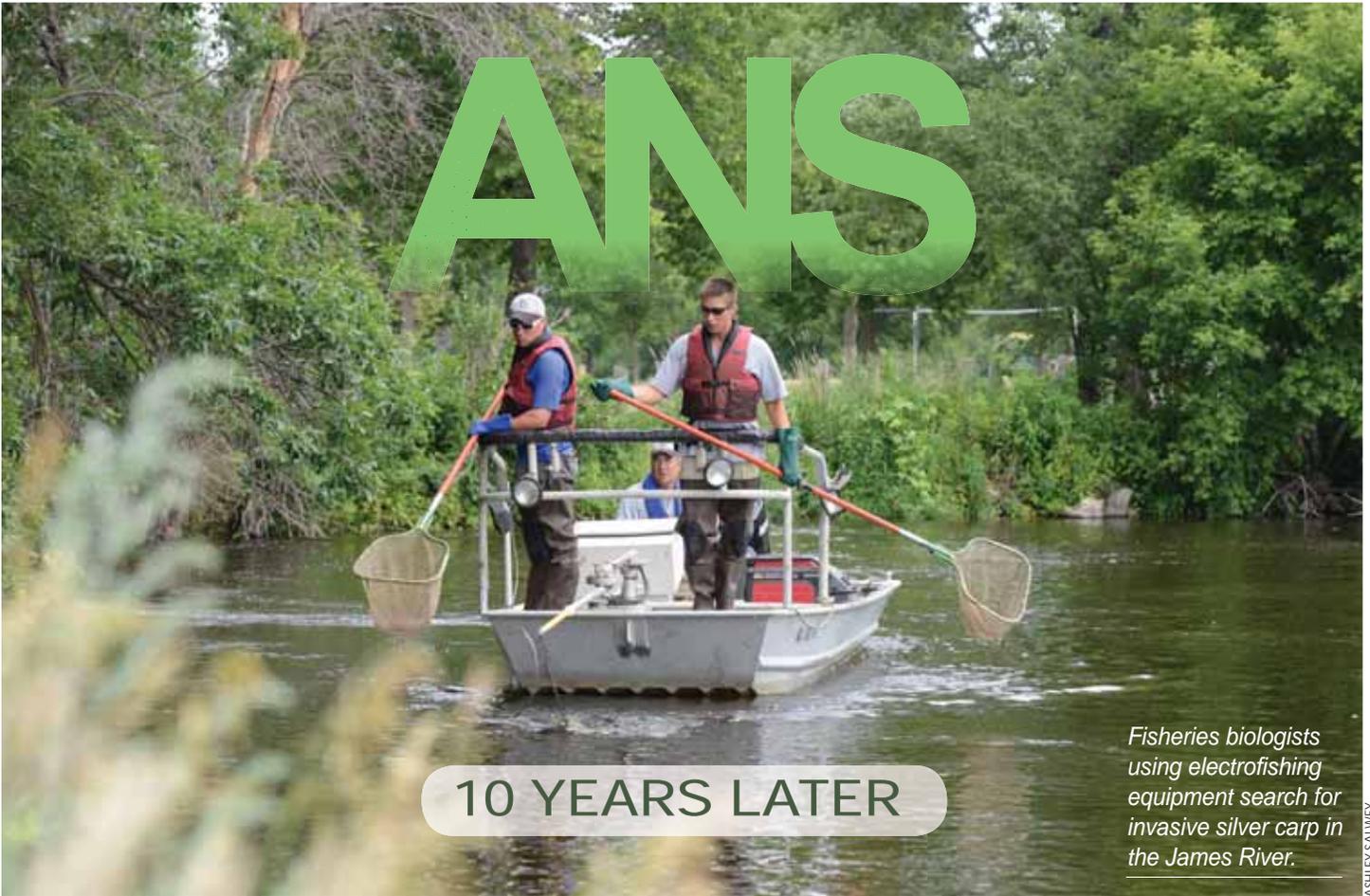
*Follow proper releasing procedures to ensure released fish will survive after they've been returned to the water.*

MIKE ANDERSON

## Catch-and-Release Tips

North Dakota Game and Fish Department fisheries biologists encourage catch-and-release fishing when the situation supports the safe return of fish to water. This practice of releasing fish the angler has no intention of using is effective only if fish are handled carefully. And anglers can do plenty to minimize harm to fish:

- Decide to release a fish as soon as it is landed. It is illegal in North Dakota to release a fish once it's been in a livewell or on a stringer.
- Do not play fish longer than necessary.
- Bring fish up from deep water slowly so they can adjust to the pressure change.
- Have a tool – needle-nose pliers or a similar tool – at the ready to remove the hook.
- If the fish is hooked deep, cut leader or line close to the mouth. Don't yank the hook from the gullet.
- If possible, leave the fish in the water when removing the hook.
- Use a landing net only when necessary.
- If the fish must be handled, use a wet glove or wet hand.
- Do not hold a fish by the eye sockets. This causes blindness or death.
- Avoid squeezing the fish to protect internal organs.
- Be careful not to damage the gills.
- Return fish to water quickly.
- When releasing an exhausted fish, gently cradle it in an upright position and move slowly back and forth in water until it fully recovers.
- If the fish is bleeding heavily, or if its swim bladder is protruding from the mouth, do not release it.



10 YEARS LATER

*Fisheries biologists using electrofishing equipment search for invasive silver carp in the James River.*

ASHLEY SALWEY

### *By Ty Stockton*

The vital message concerning the introduction and spread of aquatic nuisance species in North Dakota is nothing new. Those who have any interest in water-based activities in the state have heard it for more than 10 years now, and so far, it seems to be working.

States and provinces all around North Dakota have seen ANS infestations crop up with alarming regularity, but new infestations are rare here. Since ANS regulations were first enacted 10 years ago in 2008, the number of new discoveries of invasive species in state waters is few, but the challenge of keeping them out is greater than ever.

“This is more than just a Game and Fish issue,” said Greg Power, North Dakota Game and Fish Department

fisheries chief. “Power companies, municipalities, agriculture – it’s a concern for anyone who uses water.”

Some of those problems can involve equipment used by power plants, municipal water systems, agricultural enterprises and other industries, leading to expensive repairs. Those costs, in turn, are passed along to consumers of power, water or other products – meaning ANS infestations could affect nearly every resident of North Dakota at one point or another.

For those reasons, the Game and Fish Department launched a large-scale ANS education campaign more than 10 years ago, and has continued to emphasize that message every year. The original slogan was “Inspect, Remove, Drain,” but simpler “Clean, Drain and Dry” guidelines were implemented in 2018.

“First, we help people understand what ANS are, what kinds of impacts ANS can have, and how people can stop the spread of ANS,” said Jessica Howell, Game and Fish Department ANS coordinator. “Second, we craft regulations that are easy to understand, but that people need to follow to prevent the spread of ANS.”

“It should also be noted that we monitor North Dakota waters for the presence of ANS. We don’t just rely on public reports, though there is a public reporting form on our website now. Department staff check our waters during routine fisheries sampling, and we also have dedicated ANS sampling for high-risk waters. We have a statewide management plan that we follow for all ANS activities.”

It seems the people who use the state’s waters are taking those warnings to heart.

Compliance with regulations is better than expected, though each year Department game wardens are writing more tickets for ANS violations. There were 12 citations in 2012 and 30 in 2013. By 2017, game wardens issued 130 citations for ANS violations. But Robert Timian, Department enforcement chief, said that doesn't mean there are more people breaking the rules. He said game wardens have stepped up enforcement of ANS regulations each year.

"In the first year or so, we leaned more toward warnings than citations," he said. "It was more of an education effort than an enforcement effort."

Today, wardens are more likely to write tickets for violations than give warnings. The rules are now posted at every boat ramp in the state, in fishing and hunting regulations, and on posters at marinas.

"Recently, we've reached out to partners more to help get the message to other audiences," Howell said. "We work with state and federal agencies to get requirements in (construction and development) permits and to talk to their stakeholders. Last year was the first year we engaged marinas and pet stores for their help spreading the message to boaters and pet owners. In 2016, we started advertising toward waterfowl hunters. All these efforts are meant to increase public awareness of actions to prevent the introduction and spread of ANS."

The regulations apply to everyone who uses North Dakota waters. Anything that goes into the water must be cleaned of vegetation and drained when it comes out, according to the law. The "dry" portion is not required by law, but Howell said it's an important step to prevent the spread of ANS.

"Essentially, anything you picked up at the lake should stay there – water, plants, animals and even mud," she said. "Then make sure anything you might have missed has a chance to

die before using equipment again. It's just a few minutes of time to stop a huge problem."

The message seems to be working. By the time the first regulations were put into place, ANS was present in North Dakota in the forms of Eurasian water milfoil, curly leaf pondweed and common carp. Ten years later, only a few new species have surfaced. Zebra mussels have established in the Red River (immature forms first found in 2010 and adult mussels found in 2015) and silver carp were discovered in the James River in 2011. Both of these new species came through natural movements from connected populations in neighboring states.

Zebra mussels were discovered both upstream and downstream of North Dakota in the Red River watershed before their discovery in North Dakota waters. That occurred in 2010, when biologists identified immature zebra mussels (called veligers) within North Dakota in the Red River. Aggressive inspections revealed more veligers in the Red periodically, but no adult zebra mussels were found until

2015. With the discovery of the adult mussels though, Game and Fish enacted a new regulation requiring boaters to drain livewells before leaving a waterway anywhere in the state, and anglers could no longer transport legal live aquatic bait in water from the Red River.

The "Drain" portion of Clean, Drain and Dry means drain all water out of your boat and other equipment. "Not only is this a regulation," Howell said, "but water can hold microscopic organisms that may grow and damage your equipment over time. Leave drain plugs out and draining devices open during transport in North Dakota to avoid a citation."

Once established, zebra mussels cannot be eliminated. They pose a threat not only to the fishery, as they consume plankton needed by native species; but they also cause damage to structures and equipment, such as municipal water supply pipes and boat engines.

"In states where there are infestations of zebra mussels, it affects more than just the fisheries," Timian said. "While the fisheries are impacted, so are municipal



CRAIG BIRRE

*Zebra mussels have become established in the Red River. Zebra mussels attach to rocks, dams, pilings and other structures, as well as to outboard motors, water pipes and other equipment.*

water plants, power plants, agricultural facilities or other interests. Those cities and companies spend untold amounts of time and money keeping water intakes clear of zebra mussels.”

Silver carp pose other dangers. These fish can outcompete native fish for forage, which reduces the number of fish available for anglers. They also have a disturbing tendency to jump several feet out of the water when startled, potentially injuring boaters and other water users.

The good news is that biologists have to date not documented any silver carp reproduction in the James River. There is only one known age-class of silvers in the river, so without any new introductions, this ANS infestation may die out naturally. The silver carp made it to North Dakota waters during major floods in 2010

and 2011, when they were able to swim upstream over flooded lowhead dams.

“If another such major flood event should occur, the silver carp population could be augmented,” Howell said. “In addition, bighead and grass carp have the potential to move upstream from the lower portions of the James River during such flooding.”

Though Mother Nature doesn't pay much regard to Game and Fish rules, Timian said regulations are in place to prevent transfer of ANS by humans. One such regulation intended specifically to prevent the spread of silver carp is prohibiting bait fish trapping in the James River below Jamestown Dam.

Some ANS problems are not new to

North Dakota. Common carp are found in many state waters, and they've been here for more than 100 years. Power said carp are the biggest problem species biologists face.

“They overproduce, and they muck up the bottom of the waterway,” he said. “They consume fish eggs, and they have a prolonged spawning period, where they disturb the bottom and prevent natural vegetation from taking root.”

He pointed out that Long Lake in

*Jessica Howell, Department aquatic nuisance species coordinator, tests water samples for ANS.*



MIKE ANDERSON

Burleigh County would periodically be a great pike and perch fishery if carp weren't present there. “Because of those carp, Long Lake isn't realizing its potential as a pike and perch fishery,” he said.

Despite the best efforts of water users and agencies, some nuisance species have spread to other areas.

Eurasian water milfoil is now found in two waterways, and curly leaf pondweed is now known to exist in 10 separate waters. However, Power notes some success in the fight against ANS, as it relates to Eurasian water milfoil.

“We actually have one less water body with Eurasian water milfoil than we had before,” he said. “We had it in Dead Colt Creek (Ransom County), but through

agreements with the local water board, we drew the reservoir down 20 feet and allowed it to freeze out. The Eurasian water milfoil appears to be gone from Dead Colt Creek now.”

Because of that success, Game and Fish tried something similar to get rid of curly leaf pondweed at Raleigh Reservoir in Grant County, but it didn't work there, Power said.

The reason ANS efforts focus on keeping the problems out is that the Raleigh Reservoir example tends to be the norm in the ANS battles.

“Once ANS establish (have a self-sustaining, reproducing population), they are often nearly impossible to eradicate,” Howell said. “It really depends on the species – as an example, some aquatic plants are pretty treatable. For any species that have a chance of being eradicated from an isolated water body, it can often take years of treatments to get rid of them, or involve extreme measures such as dewatering.

Rivers present their own set of problems, and often we cannot eradicate from rivers given the complex nature of these systems and the fact that there may be an upstream population that will just re-establish the population downstream.”

There's a cost to treatment as well, and it's not always financial, she said. “Social pressures or other factors can affect which treatments may be acceptable,” Howell said. “In addition, treatments or eradication attempts can be extremely expensive, time-consuming, or kill nontarget species. It's a lot easier to prevent ANS introductions than it is to try to eradicate an established population. We do conduct 'early detection' sampling to try to detect ANS introductions before they establish,

which can sometimes increase treatment options, but many factors affect the ability to actually conduct a treatment.”

Having two new nuisance species and a handful of new areas where known ANS is found is far from perfect, but it’s better than the estimates projected back in 2008. Rusty crayfish, exotic water fleas, Asian carp, VHS virus, New Zealand mudsnail and several other species are knocking at

the door; they are known to exist in waters in the states and provinces all around us. But for now, those who use North Dakota’s waters are doing a good job of keeping these invaders at bay.

“For the most part, the message is well received,” Howell said. “When people understand the potential impacts of ANS and how it may directly affect them, they suddenly feel a responsibility to keep it

from happening. The best part is: Clean, Drain and Dry is simple. It only takes a few minutes but can have a major impact on reducing the likelihood of spreading ANS.”

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*TYSTOCKTON is the Game and Fish Department’s photographer.*

## ANS Timeline

2005

- Lawmakers enact ANS program.
- ANS management plan adopted.

2008

- First ANS administrative rules effective.
- ANS information provided on Game and Fish website.
- Signage posted at all water access sites.
- Nonresident bait sources required to pass inspection.
- ANS inspection forms for fishing tournaments.
- ANS present in state – Eurasian water milfoil, curly leaf pondweed and common carp.

2009

- Bait check stations established.
- First ANS citation written by enforcement.

2010

- Expanded information efforts.
- Adopted additional ANS administrative rules.
- Adopted Inspect, Remove, Drain campaign for ANS awareness.
- Zebra mussel veligers found in Red River.

2011

- Boat inspections mandatory for out-of-state sponsored fishing tournaments.
- Increased inspections for barges and aquatic equipment entering state.
- Silver carp found in James River.

2012

- Revamped ANS posters/brochures.
- Number of waters monitored in North Dakota increased.
- Some ANS infestations reduced or possibly eliminated.
- Curly leaf pondweed discovered in Lake Elsie (10 waters total where curly leaf pondweed is found).
- Eurasian water milfoil still contained to two waters.
- Rules established to prohibit transport of live bait out of Red River counties.

2013

- Curly leaf pondweed found in Grass Lake; otherwise ANS incidences holding steady.

2014

- Zebra mussels found both upstream and downstream of North Dakota in the Red River.
- Intensified search for rusty crayfish.
- Curly leaf pondweed found in Raleigh Reservoir.

2015

- New signage to further clarify ANS efforts.
- No sign of silver carp reproduction, though the exotics still exist in James River.
- Three adult zebra mussels found on Sorlie Bridge in Grand Forks. Many adult zebra mussels found in northern Red River.
- New regulations require all water to be drained from boats (including livewells) statewide, and no live bait permitted to be transferred out of Red River area.

2016

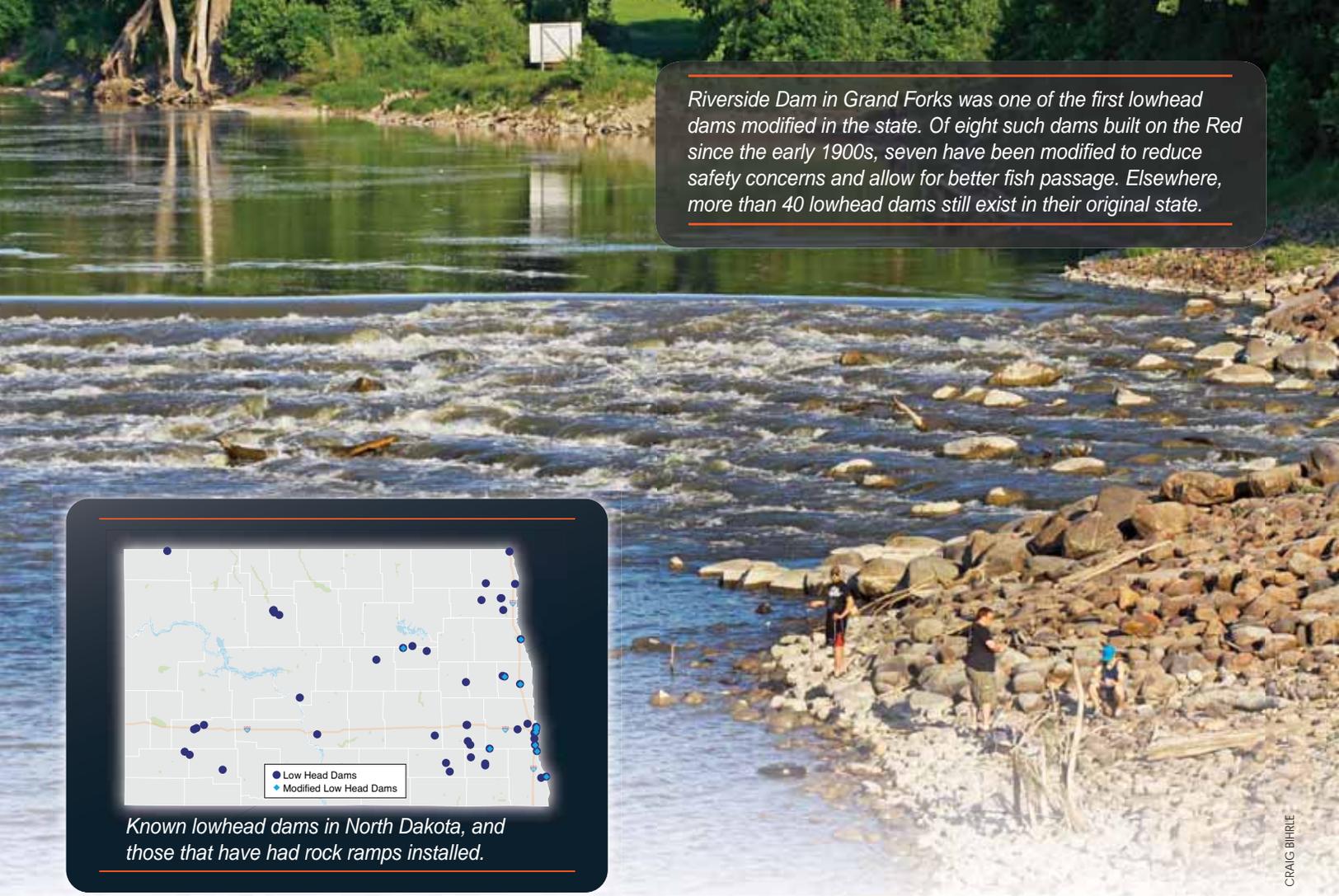
- Game and Fish hires first full-time ANS coordinator.
- Game and Fish hires ANS seasonal employees to conduct voluntary boater surveys and watercraft inspections.

2017

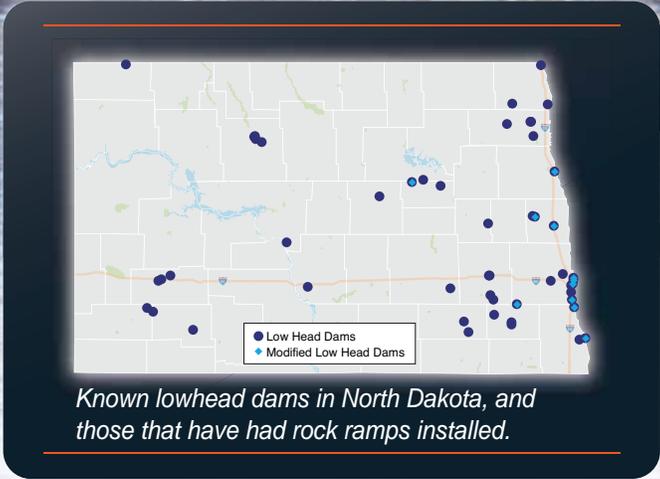
- Heightened search for zebra mussels and veligers in Missouri River due to veliger detection in upper Missouri River basin in Montana. None found.

2018

- Updating outreach efforts to Clean, Drain and Dry message.
- Updating statewide ANS management plan.



*Riverside Dam in Grand Forks was one of the first lowhead dams modified in the state. Of eight such dams built on the Red since the early 1900s, seven have been modified to reduce safety concerns and allow for better fish passage. Elsewhere, more than 40 lowhead dams still exist in their original state.*



*Known lowhead dams in North Dakota, and those that have had rock ramps installed.*

CRAIG BIRKLE

# State Agencies Work Together to Eliminate “Drowning Machines”

Starting over a century ago, many lowhead dams were built throughout North Dakota for use in livestock watering, irrigation, water supply and recreation.

Lowhead dams are usually simple concrete or rock masonry structures that span the width of a river or stream, raising the water level behind them until it reaches a height sufficient to flow over the dam.

One of the unintentional consequences that materialized is that these lowhead dams created dangerous conditions that recreational river users may not be aware of or may underestimate.

Under the right conditions, water flowing over the dam can cause a “roller effect” on the downstream side of the dam. Strong recirculating currents can trap and drown boaters, swimmers, or other water users. Air mixing in the turbulent water below the dam reduces buoyancy, making it more difficult to stay afloat even with a life jacket.

The dangers are such that in the early 1980s the North Dakota Game and Fish Department closed the area 150 feet

below the lowhead dam at Drayton on the Red River, at the request of local officials, because the area had accumulated 11 drownings over the years.

Karen Goff, the State Water Commission’s dam safety program manager, says that “One of the problems with these dams is that the level of danger can change depending on the flow conditions in the river. Hazardous conditions may not exist at a dam all the time, potentially giving people a false sense of security. What may be a pleasant, inviting looking place on one day can be very dangerous on another day under different conditions.”

According to the Association of State Dam Safety Officials, each year, dozens of lives are lost at dams on U.S. streams and rivers, many at lowhead dams, also known as run-of-river dams or “drowning machines.”

“These structures, generally less than 15 feet high, can create backflow currents and turbulence capable of producing disorientation, hypothermia, exhaustion, and brutal battering. The

# LOWHEAD DAM — SAFETY TIPS



## KNOW THE WATER COURSE

Know the water course **BEFORE** you travel on it or play in it. Lowhead dams can be very difficult to spot from upstream.



## DO NOT ENTER THE WATER TO ATTEMPT TO RESCUE

Do **NOT** enter the water to attempt to rescue pets, swimmers, or boaters who may become trapped in the hydraulic roller of a lowhead dam. Call 911, stay on shore, and throw a line or extend a pole from shore if possible.



## BOAT RESPONSIBLY

Boat with responsible, experienced boaters.



## PORTAGE AROUND ALL DAMS

Portage around all dams and re-enter well downstream of the boil.



forces combine to create a practically inescapable circular trap for even the strongest, life-jacket-clad swimmer.”

Nationwide, many deaths at lowhead dams occur when people have drowned attempting to rescue someone else, or even dogs. Even trained rescue personnel have fallen victim to lowhead dams.

Options to eliminate the public safety concerns associated with lowhead dams include removing the dam, or modifying the dam to eliminate the dangerous conditions. In some instances, removal of a lowhead dam isn't a desirable option for local entities.

“For those dams that are still serving a purpose, the installation of a rock ramp on the downstream side of a lowhead dam alters how the river flows, so that the ‘drowning machine’ effect is no longer an issue,” said Greg Power, North Dakota Game and Fish Department fisheries chief. “If done correctly, rock ramps also allow fish to freely move up and downstream, where

before the dam served as a barrier to fish travel. Connectivity of the river system as a whole can be vitally important for a healthy aquatic community.”

Multiple agencies and groups in North Dakota have made progress toward eliminating these public safety hazards. To date in North Dakota, one lowhead dam has been removed, and 11 have had rock ramp fish passages installed.

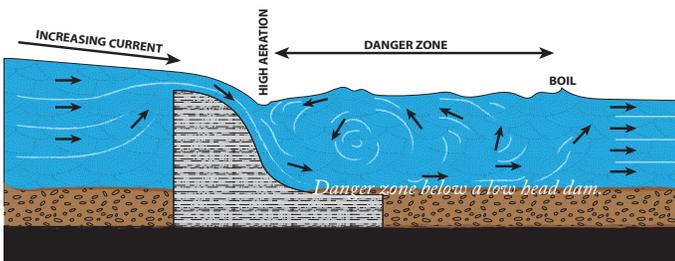
“We know of 41 lowhead dams that remain in North Dakota,” Goff said. “Removal or modification of these dams should be considered to make them safer.”

Because lowhead dams are at times dangerous, the State Water Commission and Game and Fish Department are supportive of local entities interested in removing structures that no longer serve any purpose, or installing improvements, such as rock ramp fish passages, on dams that are still necessary. Under the Water Commission's cost-share program, local dam owners can get up to 75 percent of their project covered by the state, if dam safety concerns exist.

In the coming years, the State Water Commission and Game and Fish Department will continue to provide education and will work with local dam owners to reduce risk and improve riparian habitat by providing cost-share to convert lowhead dams statewide.

As part of the state's education efforts, the State Water Commission has purchased signs that are available free of charge to dam owners who want to install them at lowhead dams. For more information on the free dam safety signs, call 701-328-2782, or email [jessiewald@nd.gov](mailto:jessiewald@nd.gov).

For additional information on lowhead dams visit ASDSO's website at <https://damsafety.org/public-awareness>.



*Article courtesy of the North Dakota State Water Commission.*



# BUFFALOBERRY PATCH

By Greg Freeman, Department News Editor

## Bighorn Sheep Population Declines

The North Dakota Game and Fish Department's 2017 bighorn sheep survey revealed a minimum of 265 bighorn sheep in western North Dakota, down 11 percent from 2016 and 9 percent below the five-year average.

Brett Wiedmann, Department big game biologist, said the survey count was the lowest since 2006. "The decline in the 2017 count reflects the spread of bacterial pneumonia to three previously unaffected herds and consequently the adult and lamb mortalities that followed," he said.

The northern badlands population declined 10 percent from 2016, and the southern badlands population was down 21 percent.

"The total count of adult rams and ewes was much lower than the record high counts in 2016, but the lamb count and recruitment rate improved slightly in 2017, albeit still much below the long-term averages," Wiedmann said.

Fortunately, Wiedmann said, adult mortality was low in previously affected herds, and lamb survival improved as well, which could indicate those herds initially exposed to the deadly pathogens in 2014 are beginning to recover.

A bighorn sheep hunting season is tentatively scheduled to open in 2018, and will be determined September 1, after the summer population survey is completed.

## Free Fishing Weekend

North Dakota's free fishing weekend is June 2-3. Resident anglers may fish that weekend without a license, except for paddlefish. All other fishing regulations apply.

## Pronghorn Hunting Season Statistics

Hunter success during last fall's pronghorn hunting season was 75 percent.

Game and Fish issued 410 licenses (255 lottery and 155 gratis), and 366 hunters took 275 pronghorn, consisting of 264 bucks, 10

does and one fawn. Each hunter spent an average of 2.4 days afield. Three percent of the harvest occurred during the archery-only portion of the season.

The 2018 pronghorn hunting season will be determined in July.

## Agency Sponsors Earth Day Project

In recognition of Earth Day, the Game and Fish Department held a contest for students to design a North Dakota Earth Day Patch. The agency also sponsored clean-up days on publicly owned or managed lands.

Each member of a school, Girl Scout, Boy Scout, 4-H club or youth organization who participated in cleaning up public lands this spring will receive a specifically designed conservation patch.

Patch contest winners in the three age categories were Brooke Livingston of Kenmare (6-9), Abbey Peterson of Velva (10-13), and Deanna Rose of Grand Forks (14-18). Rose's design was chosen as the contest winner, and is featured on this year's Earth Day patch.



Deanna Rose,  
Patch Winner  
Grand Forks



Brooke Livingston  
1st Place  
Kenmare



Abbey Peterson  
1st Place  
Velva

## BOAT NORTH DAKOTA COURSE

Boat owners are reminded that children who want to operate a boat or personal watercraft alone must first take the state's boating basics course. State law requires youngsters ages 12-15 to pass the course before they operate a boat or personal watercraft with at least a 10 horsepower motor. In addition, some insurance companies give adult boat owners who pass the course a discount on boat insurance.

The course is available for

home-study from the North Dakota Game and Fish Department's Bismarck office. Two commercial providers also offer the course online, and links to those sites are found on the Department's website at gf.nd.gov.

While the home-study course is free, there is a fee for the online course. The online provider charges for the course, not the Game and Fish Department. For more information call 701-328-6300.



## NASP State Tournament Results

While a spring snowstorm kept some of the record 750 registrants from attending, 600 archers did compete in the North Dakota National Archery in the Schools Program state bull's-eye tournament in Minot in March.

Oakes students claimed top honors in the elementary (grades 4-6) and middle school (grades 7-8) divisions, while Hankinson received the top prize in the high school (grades 9-12) division.

The overall male winner was Hankinson archer Cheyne Meyer, while Medina student Gracie Gunderson claimed the top spot in the female division.

Winning teams and the top 10 individuals qualify for the national tournament, scheduled for May in Louisville, Kentucky. The Game and Fish Department and North Dakota Youth Archery Advisory Council contribute a total of \$3,000 in travel assistance to the first place team in each division, and \$1,000 to the overall male and female individual winners. In addition, a total of \$20,000 in college scholarships was awarded by the NDYAAC to the top five overall scorers in both boys and girls divisions.

Qualifying for nationals in each division are:

- **High school boys** – 1) Cheyne Meyer, Hankinson; 2) Ty Wixo, Wahpeton; 3) Conor Shall, Oakes; 4) Evan Mickelson, Mt. Pleasant; 5) Chase Bladow, Hankinson; 6) Michael McKenna, North Sargent; 7) Clayton Stone, Hankinson; 8) Koven Walford, New Rockford-Sheyenne; 9) Michael Heim, Oakes; 10) and Ben Frankki, Lidgerwood.
- **High school girls** – 1) Gracie Gunderson, Medina; 2) Alicia Biewer, Hankinson; 3) Kate Loewen, Hankinson; 4) Jaden Gilje, North Sargent; 5) Jaidyn Sander, Hankinson; 6) Josephine Nelson, North Sargent; 7) Sydney Berg, Edgeley; 8) Avery Trittin, Lidgerwood; 9) Ainsley Helgerson, Oakes; 10) and Mary Goroski, Wahpeton.
- **Middle school boys** – 1) Brady Sand, Mayville-Portland-Clifford-Galesburg; 2) Casey Everson, Barnes County North; 3) Joshua Wiebusch, Wahpeton; 4) Jack Thompson, Hope-Page; 5) Clancy Zimbelman, Oakes; 6) Dillon Deering, Oakes; 7) Justin Schlenker, Barnes County North; 8) Grady Henderson, Edgeley; 9) Avery McFarland, North Sargent; 10) and Marcus Garza, Oakes.
- **Middle school girls** – 1) Rylee Suhr, Griggs County; 2) Lily Wiek, Oakes; 3) Ariana Onchuck, Hankinson; 4) Mackenzie Motter, Hope-Page; 5) Jaycee Brown, Hankinson; 6) Tallin Schafer, Lidgerwood; 7) Paetyn Hamann, North Sargent; 8) Sadie Keller, Hankinson; 9) Trinity Brandenburg, Edgeley; 10) and Madison Sitzmann, Edgeley.
- **Elementary boys** – 1) Brady Haugen, Griggs County; 2) Braysen Sagert, Oakes; 3) Damian Carlson, Edgeley; 4) Colin Olson, North Sargent; 5) Tucker Schacher, Wilton; 6) Wayland Sabinash, Kensal; 7) Connor Boe, Oakes; 8) Bryson McKown, Wyndmere; 9) Zachary Quinn, Wilton; 10) and Andrew Jean, Hankinson.
- **Elementary girls** – 1) Madison Samuelson, Mt. Pleasant; 2) Shayle Zimbelman, Oakes; 3) Carrie Osier, North Sargent; 4) Taya Schelske, Medina; 5) Avery St. Germaine, Mt. Pleasant; 6) Merissa Sitzmann, Edgeley; 7) Danica Onchuck, Hankinson; 8) Kaiya O'Connor, New Rockford-Sheyenne; 9) Serenity Reynolds, Pingree-Buchanan; 10) and Kiara Frederick, Wilton.

In addition, archers had the option of competing in a NASP 3-D Challenge, run simultaneously with the bull's-eye tournament.

Overall male and female winners were Brady Sand, Mayville-Portland-Clifford-Galesburg, and Gracie Gunderson, Medina.

Andrew Hill of Oakes was the winner of a pronghorn hunt in Wyoming, with the winning score decided by a one arrow shoot-off from the top five overall archers.

Top performers in the 3-D high school boys were 1) Andrew Hill, Oakes; 2) Chase Bladow, Hankinson; 3) Conor Shall, Oakes; 4) Tavon Stadler, Griggs County; 5) and Evan Mickelson, Mt. Pleasant.

- **3-D high school girls** – 1) Gracie Gunderson, Medina; 2) Jaidyn Sander, Hankinson; 3) Josephine Nelson, North Sargent; 4) Kate Loewen, Hankinson; 5) and Avery Trittin, Lidgerwood.
- **3-D middle school boys** – 1) Brady Sand, Mayville-Portland-Clifford-Galesburg; 2) Joshua Wiebusch, Wahpeton; 3) Clancy Zimbelman, Oakes; 4) Jack Thompson, Hope-Page; 5) and Maxin Walock, Oakes.
- **3-D middle school girls** – 1) Piper Suhr, Griggs County; 2) Rylee Suhr, Griggs County; 3) Kyria Dockter, New Rockford-Sheyenne; 4) Paetyn Hamann, North Sargent; 5) and Aysia Frederick, Wilton.
- **3-D elementary boys** – 1) Damian Carlson, Edgeley; 2) Braysen Sagert, Oakes; 3) Colin Olson, North Sargent; 4) Alex Weisenburger, New Rockford-Sheyenne; 5) and Brady Haugen, Griggs County.
- **3-D elementary girls** – 1) Madison Samuelson, Mt. Pleasant; 2) Shayle Zimbelman, Oakes; 3) Merissa Sitzmann, Edgeley; 4) Carrie Osier, North Sargent; 5) and Skyler Foertsch, Hankinson.



*Daniel Schumacher*  
**~BEST OF SHOW~**  
*North Dakota Junior*  
*Duck Stamp Contest*  
2018

## North Dakota Junior Duck Stamp Winners

An acrylic painting of a pair of Canada geese was chosen the 2018 Best of Show in the North Dakota Junior Duck Stamp Contest.

Daniel Schumacher, 15, of Linton, titled his painting "Lakeside Pair." His artwork was selected from more than 1,000 entries from across North Dakota.

Schumacher's painting represented North Dakota at the National Junior Duck Stamp contest sponsored by the U.S. Fish and Wildlife Service. The winner of the national contest held in Bismarck in April will have their artwork made into a stamp.

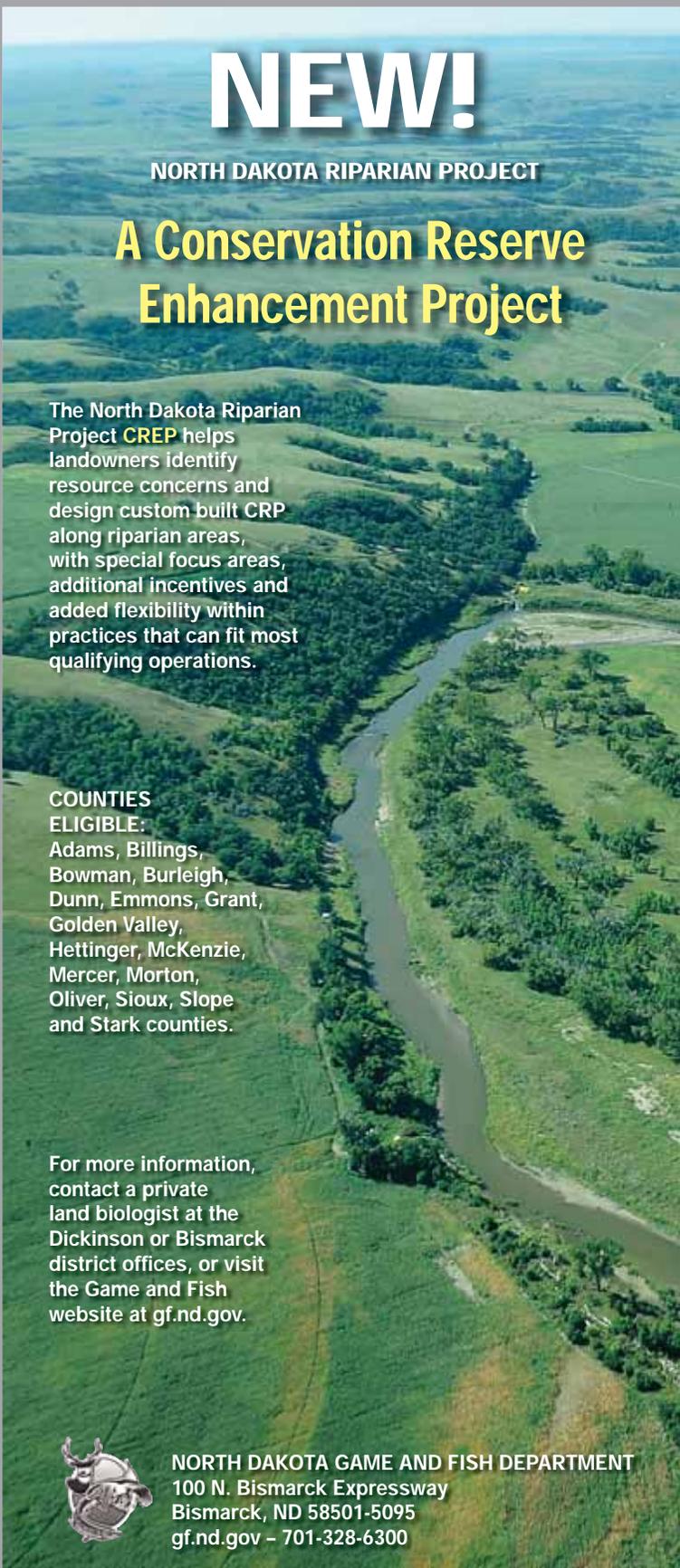
Other first place winners in the four age categories were:

- Grades K-3 – Levi Bro, Bismarck; Abigail Bro, Bismarck; and Gabriel Coleman, Baldwin.
- Grades 4-6 – Angela Chen, Devils Lake; Grace Harkness, Devils Lake; and Natasha Anderson, Fairmont.
- Grades 7-9 – Daniel Schumacher, Linton; McKenzie Balzer, Bismarck (Runner-up Best of Show); and Bradyn Modine, Alexander.
- Grades 10-12 – Sydney Nelson, Valley City; Fischer Ackerson, Sherwood; and Kayla Triebold, Oriska.

## KADING RECEIVES CONSERVATION AWARD

Kevin Kading, Game and Fish Department private land section leader, was recognized by Pheasants Forever and Quail Forever during the 83rd North American Wildlife and Natural Resources Conference in Norfolk, Virginia in March.

Kading was presented with a Conservation Service Award given to individuals "selected for their distinguishing contributions to wildlife habitat conservation efforts nationwide, including partnership programs, which have achieved landscape-level habitat improvements for a variety of wildlife species."



# NEW!

## NORTH DAKOTA RIPARIAN PROJECT

### A Conservation Reserve Enhancement Project

The North Dakota Riparian Project **CREP** helps landowners identify resource concerns and design custom built CRP along riparian areas, with special focus areas, additional incentives and added flexibility within practices that can fit most qualifying operations.

**COUNTIES ELIGIBLE:**  
Adams, Billings, Bowman, Burleigh, Dunn, Emmons, Grant, Golden Valley, Hettinger, McKenzie, Mercer, Morton, Oliver, Sioux, Slope and Stark counties.

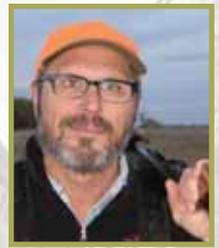
For more information, contact a private land biologist at the Dickinson or Bismarck district offices, or visit the Game and Fish website at [gf.nd.gov](http://gf.nd.gov).



**NORTH DAKOTA GAME AND FISH DEPARTMENT**  
100 N. Bismarck Expressway  
Bismarck, ND 58501-5095  
[gf.nd.gov](http://gf.nd.gov) – 701-328-6300

CRAIG BIHRE

# back cast



By Ron Wilson

In its heyday, say, 20 years ago, this wooden structure stood taller. Maybe it was never really plumb with the world, but after years of shouldering against stiff northwest winds that seemingly sprinted downhill from Canada, the small building has surrendered with a slight but convincing lean to the south.

Cattle rubbing up against it in recent years to scratch whatever itches haven't done it any favors, either.

It was originally constructed with sweat and lumber to house an electric motor to pump well water to the surface. Today, with the window removed and two buckets turned upside-down as seats, the structure serves as a fixed blind that, if wild turkeys pay attention to this sort of thing, hasn't moved in their lifetimes and is as much a part of the landscape as the thick, wooded draws and wide-open pasture.

It's simply a coincidence, considering the landowner who built the thing years ago wasn't a turkey hunter, that the pump house rests within shotgun range of one of the handful of spots on the property where toms strut and gobble in spring to attract hens.

On the last Sunday in April, we slipped into the pump house long before sunrise, adjusted the two buckets for the best view out what was once an east-facing window and ... questioned quietly why we bothered getting out of bed.

When we left home in the dark, the wind was already

blowing hard enough to sweep a ball cap off your head. Too hard, we figured, to fool a wild bird that's already on edge to begin with.

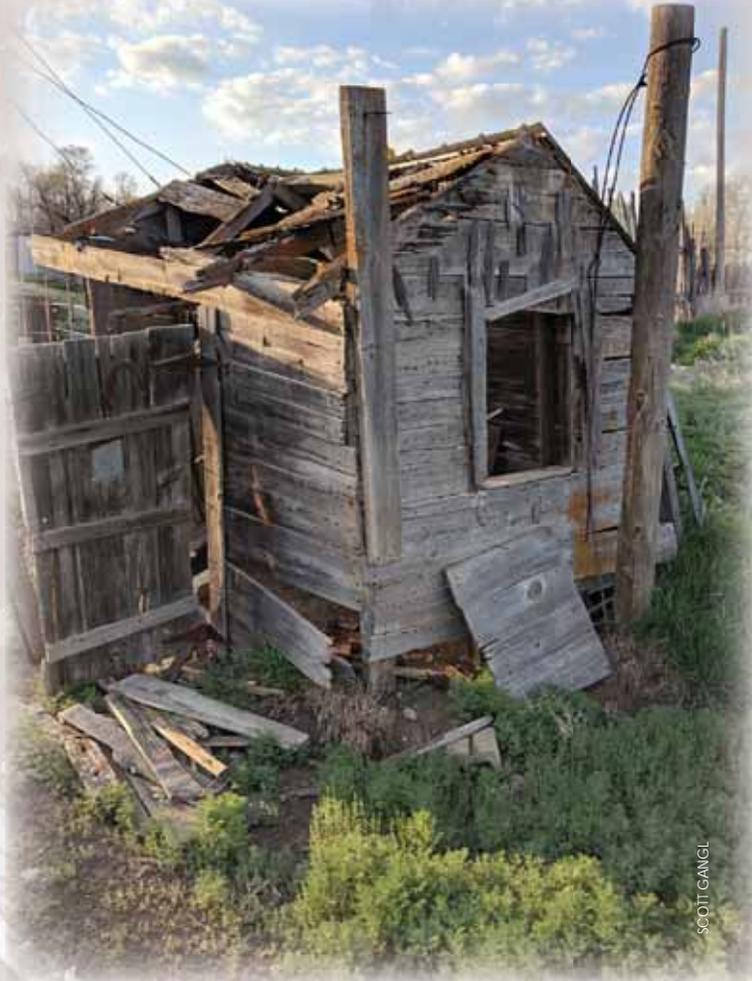
Nonetheless, like most hunters and others who spend time outdoors, it's often difficult to pick our spots. We go when we can, no matter the weather, or how late we got to bed the night before, because that's just the way life is nowadays.

I've long told my kids that no matter the day, the conditions, it's worth rolling out of bed before the sun because you just never know what's in store. I've sung this chorus enough that I often believe it myself.

To prove this point, a guy I work with was turkey hunting with his son earlier this spring when a porcupine lumbered out of a tree next to them, relieved itself and started eating a fallen branch. Minutes later, a badger ripped by their makeshift blind at full-speed, heading to who knows where.

His story also included something about a noisy bobcat fight over a hill and out-of-sight. I don't remember if his son shot a tom that morning, or if he even mentioned it. Doesn't matter, really.

To say that we were treated to that kind of wild theater sitting on overturned buckets as the wind rattled our south-leaning blind, would be a lie. Yet, to say that we wouldn't do it all over again wouldn't be true, either.



RON WILSON is editor of North Dakota OUTDOORS.



September  
1964  
North Dakota  
Outdoors

# A LOOK BACK By Ron Wilson

This year marks the first time that all prospective hunters must apply online for deer gun and muzzleloader licenses.

The deadline is June 6.

Considering the significant advances in technology over time, and that the majority of regular lottery and gratis applications were submitted online/electronically in 2017, this all-in approach is not a big leap.

To really raise some astonished eyebrows, we believe, you need to march back about a half-century.

In 1964, when you could buy a ticket to a movie for \$1.25, the North Dakota Game and Fish Department held its first computerized lottery using the Department of Transportation's IBM 1401 computer.

"An antelope license untouched by human hands! For those sportsmen familiar with the old, handwritten hunting license, something new has been

added ... This year, for the first time in license writing history of the Game and Fish Department, a license will be issued by a machine provided by an IBM card," from the September 1964 issue of *North Dakota OUTDOORS*.

The author assured readers at the time that automation hadn't taken over completely, as "Someone is still required to insert the antelope license in an envelope for mailing, along with the metal locking seal, and with a quick glance ascertain that the serial number of the license matches the number on the metal tag."

At the time, Game and Fish had its own key punch machine and operators, and the information on the pronghorn license applications was converted to IBM cards after the applications were received at headquarters.

"On the day of the drawing, the IBM cards are fed into Unit 1402. This unit, identified as a card reader, transmits the

information from the cards to the 1401 computer (the brains) at a rate of 600 cards per minute. The computer makes an impartial selection of cards for the total number of licenses issued. Each card is processed through the machine three times and each hunter actually has three chances of being drawn," from the September 1964 issue of *North Dakota OUTDOORS*.

It was estimated at the time that the entire drawing, including printing the licenses, would take less than an hour.

"IBM machines do not care who gets a permit, and they make their selections in a completely detached and accurate manner. The machines do not recognize a V.I.P. when they see one and every applicant has an identical chance of being drawn," the author concluded in 1964.

*RON WILSON is editor of North Dakota OUTDOORS.*